What is claimed is:

1. A method of defining a feature on a substrate, comprising:

(a) providing a substrate having a multilayer stack formed thereon;

(b) forming a first mask through one or more layers of the multilayer stack;

(c) forming a second mask on one or more sidewalls of the first mask;

(d) etching one or more layers of the multilayer stack to the substrate surface using the second mask to form an opening in the multilayer stack;

(e) filling the opening formed in the multilayer stack with one or more material layers; and

(f) removing the multilayer stack from the substrate leaving thereon a feature formed of the one or more material layers.

2. The method of claim 1 wherein step (b) further comprises:

(b1) forming a photoresist pattern on the multilayer stack;

(b2) transferring the photoresist pattern through one or more layers of the multilayer stack; and

(b3) removing the photoresist pattern from the multilayer stack.

3. The method of claim 1 wherein the first mask comprises at least one of a dielectric antireflective coating (DARC) and an amorphous carbon layer.

4. The method of claim 1 wherein step (c) further comprises;

(c1) depositing a second mask layer conformably on the first mask; and

(c2) etching portions of the second mask layer on horizontal surfaces of the substrate leaving the second mask layer on one or more sidewalls of the first mask.

5. The method of claim 1 wherein the second mask comprises a material selected from the group consisting of silicon dioxide (SiO_2) and silicon nitride (Si_3N_4).

6. The method of claim 1 wherein the one or more material layers filling the

opening formed in the multilayer stack comprise polysilicon.

7. A method of fabricating a notch gate structure of a field effect transistor comprising:

(a) providing a substrate having a multilayer stack formed on a gate dielectric layer;

(b) forming a first mask through one or more layers of the multilayer stack;

(c) forming a second mask on one or more sidewalls of the first mask;

(d) etching one or more layers of the multilayer stack to the surface of the gate dielectric layer using the second mask to form a notch gate opening in the multilayer stack;

(e) filling the notch gate opening formed in the multilayer stack with one or more material layers; and

(f) removing the multilayer stack from the substrate leaving thereon a a notch gate electrode formed on the gate dielectric layer.

8. The method of claim 7 wherein step (b) further comprises:

(b1) forming a photoresist pattern on the multilayer stack;

(b2) transferring the photoresist pattern through one or more layers of the multilayer stack; and

(b3) removing the photoresist pattern from the multilayer stack.

9. The method of claim 7 wherein the first mask comprises at least one of a dielectric antireflective coating (DARC) and an amorphous carbon layer.

10. The method of claim 7 wherein step (c) further comprises:

(c1) depositing a second mask layer conformably on the first mask; and

(c2) etching portions of the second mask layer on horizontal surfaces of the substrate leaving the second mask layer on one or more sidewalls of the first mask.

11. The method of claim 7 wherein the second mask comprises a material selected

from the group consisting of silicon dioxide (SiO_2) and silicon nitride (Si_3N_4).

12. The method of claim 7 wherein the one or more material layers filling the notch gate opening formed in the multilayer stack comprise polysilicon.

13. A method of fabricating a field effect transistor, comprising:

(a) providing a substrate having a multilayer stack formed on a gate dielectric layer;

(b) forming a first mask through one or more layers of the multilayer stack;

(c) forming a second mask on one or more sidewalls of the first mask;

(d) etching one or more layers of the multilayer stack to the surface of the gate dielectric layer using the second mask to form a notch gate opening in the multilayer stack;

(e) filling the notch gate opening formed in the multilayer stack with one or more material layers; and

(f) removing the multilayer stack from the substrate leaving thereon a a notch gate electrode formed on the gate dielectric layer.

14. The method of claim 13 wherein step (b) further comprises:

(b1) forming a photoresist pattern on the multilayer stack;

(b2) transferring the photoresist pattern through one or more layers of the multilayer stack; and

(b3) removing the photoresist pattern from the multilayer stack.

15. The method of claim 13 wherein the first mask comprises at least one of a dielectric antireflective coating (DARC) and an amorphous carbon layer.

16. The method of claim 13 wherein step (c) further comprises:

(c1) depositing a second mask layer conformably on the first mask; and

(c2) etching portions of the second mask layer on horizontal surfaces of the substrate leaving the second mask layer on one or more sidewalls of the first mask.

17. The method of claim 13 wherein the second mask comprises a material selected from the group consisting of silicon dioxide (SiO_2) and silicon nitride (Si_3N_4).

18. The method of claim 13 wherein the one or more material layers filling the notch gate opening formed in the multilayer stack comprise polysilicon.